

An architecture for intercepting and processing packets from a network is disclosed. The architecture provides both stateful and stateless processing of packets in the bi-directional network flow. Further, stateless processing is provided by a parallel arrangement of network processors while stateful processing is provided by a serial arrangement of network processors. The architecture permits leveraging existing bi-directional devices to process packets in a uni-directional flow, thereby increasing the throughput of the device. The ability to share state among the stateless processor, among the stateful processors of each packet flow direction and between the stateless and stateful processors provides for dynamic adaptability and analysis of both historical and bi-directional packet activity.